

Claims

1. A packaging bag formed by bending a laminate film at two portions in parallel to each other such that both end portions thereof are mated to each other and the mated end portions are bonded together so as to provide a tubular body having upper and lower openings, which are sealed by forming upper and lower seal portions, respectively, wherein

said two bent portions of the laminate film constitute side edge portions as boundary portions between a front surface portion and a back surface portion of a packaging bag,

said upper seal portion is formed with a rough surface seal open portion formed with aggregation of a plurality of fine recesses formed to an outer layer constituting the laminate film and a plurality of fine through holes penetrating the outer layer so that the rough surface seal open portion is formed to the front surface and/or back surface portion of the packaging bag so as to include one of the side edge portions thereof, and

said rough surface seal open portion is formed in the upper seal portion such that a lower end of the rough surface seal open portion is apart upward from a lower end of the upper seal portion.

2. The packaging bag according to claim 1, wherein said mated end portions are bonded together with a predetermined width at the back surface side of the packaging bag so as to form a back seal portion,

said upper seal portion includes a first seal portion formed in a width direction of the packaging bag from one side edge thereof and having a relatively deep depth in a vertical direction of the front and back

surface portions and a second seal portion formed between the first seal portion and another side edge of the packaging bag in the width direction thereof and having a relatively shallow depth, compared with the first seal portion, in a vertical direction of the front and back surface portions,

5 said rough surface seal open portion is formed in the first seal portion, and

 an intermediate rough surface seal open portion is formed with aggregation of a plurality of fine recesses formed to the outer layer constituting the laminate film and a plurality of fine through holes
10 penetrating the outer layer so that the intermediate rough surface seal open portion is formed, in the back surface portion, to a root portion of the back seal portion facing the another side edge portion of the packaging bag.

15 3. A packaging bag formed by bending a laminate film into two portions so as to provide a bent portion as one side edge portion constituting a boundary of a front surface portion and a back surface portion of a packaging bag and forming seal portions by bonding the front surface portion and the back surface portion of the packaging bag at three
20 side edge portions other than the one side edge portion thereof, wherein

 said three seal portions includes an upper seal portion, which includes a rough surface seal open portion formed from aggregation of a plurality of fine recesses formed to an outer layer constituting the laminate film and a plurality of fine through holes penetrating the outer
25 layer so that rough surface seal open portion is formed to the front surface and/or back surface portion of the packaging bag so as to include the

bent portion forming the side edge portion, and

said rough surface seal open portion is formed in the upper seal portion such that a lower end of the rough surface seal open portion is apart upward from a lower end of the upper seal portion.

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4. The packaging bag according to claim 3, wherein said upper seal portion includes a first seal portion formed in a width direction of the packaging bag from the bent portion and having a relatively deep depth in a vertical direction of the front and back surface portions and a second seal portion formed between the first seal portion and another side edge of the packaging bag opposing to the one side edge formed as bent portion in the width direction thereof and having a relatively shallow depth, compared with the first seal portion, in a vertical direction of the front and back surface portions, and said rough surface seal open portion is formed in the first seal portion.

5. A packaging bag formed by bending a laminate film at two portions in parallel to each other such that both end portions thereof are mated to each other and the mated end portions are bonded together so as to provide a tubular body having upper and lower openings, which are sealed by forming upper and lower seal portions, respectively, wherein

said two bent portions of the laminate film constitute side edge portions as boundary portions between a front surface portion and a back surface portion of a packaging bag so that the mated end portions is bonded together with a predetermined width at the back surface side of the packaging bag so as to form a back seal portion,

said upper seal portion includes a first seal portion formed in a width direction of the packaging bag from one side edge thereof to a portion near the back seal portion and having a relatively deep depth in a vertical direction of the front and back surface portions and a second seal portion formed between the first seal portion and another side edge of the packaging bag in the width direction thereof and having a relatively shallow depth, compared with the first seal portion, in a vertical direction of the front and back surface portions,

said first seal portion is formed with a rough surface seal open portion formed with aggregation of a plurality of fine recesses formed to an outer layer constituting the laminate film and a plurality of fine through holes penetrating the outer layer so that the rough surface seal open portion is formed to the front surface and/or back surface portion of the packaging bag so as to include one of the side edge portions thereof, and

an intermediate rough surface seal open portion is formed with aggregation of a plurality of fine recesses formed to the outer layer constituting the laminate film and a plurality of fine through holes penetrating the outer layer so that the intermediate rough surface seal open portion is formed, in the back surface portion, to a root portion of the back seal portion facing the another side edge portion of the packaging bag.

6. A packaging bag formed by bending a laminate film at two portions in parallel to each other such that both end portions thereof are mated to each other and the mated end portions are bonded together so as to provide a tubular body having upper and lower openings, which are

sealed by forming upper and lower seal portions, respectively, wherein

said two bent portions of the laminate film constitute side edge portions as boundary portions between a front surface portion and a back surface portion of a packaging bag so that the mated end portions is
5 bonded with a predetermined width at the back surface side of the packaging bag so as to form a back seal portion,

said upper seal portion includes a first seal portion formed in a width direction of the packaging bag from one side edge thereof to a portion near the back seal portion and having a relatively deep depth in a
10 vertical direction of the front and back surface portions and a second seal portion formed between the first seal portion and another side edge of the packaging bag in the width direction thereof and having a relatively shallow depth, compared with the first seal portion, in a vertical direction of the front and back surface portions,

15 a rough surface seal open portion is formed with aggregation of a plurality of fine recesses formed to an outer layer constituting the laminate film and a plurality of fine through holes penetrating the outer layer so that the rough surface seal open portion is formed to the front surface and/or back surface portion of the packaging bag between the
20 lower end edge of the first seal portion and the lower end edge of the second seal portion in the vertical direction of the packaging bag so as to include the another side edge portions thereof, and

an intermediate rough surface seal open portion is formed with aggregation of a plurality of fine recesses formed to the outer layer
25 constituting the laminate film and a plurality of fine through holes penetrating the outer layer so that the intermediate rough surface seal

open portion is formed, in the back surface portion, to a root portion of the back seal portion facing the one side edge portion of the packaging bag.

7. The packaging bag according to any one of claims 1 to 6, wherein said rough surface seal open portion is formed so as to gradually protrude towards a central portion in the width direction of the packaging bag from upper and lower end portions in the vertical direction of the rough surface seal open portion.

8. The packaging bag according to any one of claims 1 to 6, wherein said rough surface seal open portion is provided with a portion, at which the recesses are formed coarsely in density, along a peripheral edge portion of the rough surface seal open portion.

9. The packaging bag according to any one of claims 1 to 6, wherein said rough surface seal open portion is provided with a portion, at which the recesses having a relatively shallow depth are formed, along a peripheral edge portion of the rough surface seal open portion.

10. The packaging bag according to any one of claims 1 to 6, wherein said rough surface seal open portion is provided with a portion, at which the recesses having a relatively small size are formed, along a peripheral edge portion of the rough surface seal open portion.